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OMMATIUS (DIPTERA: ASILIDAE) IN THE LESSER ANTILLES

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Abstract.—The species of *Ommatius* of the Lesser Antilles are revised. Five new species, *Ommatius* ***prolongatus***, *O.* ***dimidiatus***, *O.* ***villosus***, *O.* ***emarginatus*** and *O.* ***infractus***, are described and their genitalia illustrated. Only *O. infractus* ranges onto the South American continent and into Panama while the remaining species are endemic to the Caribbean. A key to the known species of the Lesser Antilles is included.

This paper is the fourth of a series that will eventually cover all the neotropical species of *Ommatius* Wiedemann. Earlier papers (Scarbrough and Rutkauskas, 1983; Scarbrough, 1984a, b, 1985) treated the fauna of the Greater Antilles and the Bahamas. The present paper covers the species in the Lesser Antilles (Fig. 1). Species found on the islands south of Grenada are mainland species and will be covered in a later paper. Included here are six species, five of them new to science. Of these, four are endemic to the Lesser Antilles and one species, *O. infractus* Scarbrough, is widespread, ranging onto the South American continent southward to southern Brazil and Paraguay and northward into Panama. Although formerly reported from the Caribbean (Williston and Aldrich, 1896; Martin and Papavero, 1970), *O. tibialis* Say is probably limited to eastern United States (Bullington and Lavigne, 1984) and is not included in this paper.

The genus *Ommatius* is well represented in the Caribbean with a total of 27 known species. Presently most species are limited in their distribution to one or two islands, with *O. infractus* and *O. dimidiatus* Scarbrough being the exceptions. Surprisingly the faunas of eastern United States, the Greater Antilles, and the Bahamas do not share a single species, and only one species is common to the faunas of the Lesser Antilles and South America. Thus, the Caribbean faunas are almost entirely insular, forming one large heterogeneous assemblage of related species. They may, however, be divided into at least 4 groups based upon genitalic characters, color of the femur, presence or absence of scutellar and anepimeral bristles in both sexes, and presence or absence of a dilated costa in males. Further study is necessary to determine whether or not these characters are indicative of natural groups.

Specimens used in this study are in the following museums and private collections: Museum of Comparative Zoology (MCZ), American Museum of Natural History (AMNH), Ohio State University (OSU), National Museum of Natural History (NMNH), Mike Ivie (MI), Eric Fisher (EF), California Academy of Sciences (CAS), British Museum of Natural History (BM(NH)), and Instituto de Zoologia Agricola, Universidad de Central Venezuela, Maracay (IZA).

Fig. 1. The Lower Antilles.

Most illustrations were made from dissected genitalia that had been cleared in KOH for 24–48 hours, washed in alcohol and held in glycerine. When included, bristles and hairs indicate relative sizes and distribution, and are not intended to show actual numbers of individuals.

KEY TO *OMMATIUS* SPECIES IN THE LESSER ANTILLES

1. Scutellar margin with short, thin, brown hairs or strong bristles 2
– Scutellar margin without short, thin, brown hairs or bristles 3
2. Scutellar margin with 2–3 thin brown hairs, not longer than dorsal pile; 8–10 pairs of short, thin, dorsocentrals posteriorly; hairs between rows of dorsocentrals similarily short, thin and abundant; 3rd antennal segment short, only slightly longer than wide (Montserrat) .... *O. prolongatus* n. sp.
– Scutellar margin with 2 strong bristles, much longer than dorsal pile; 2–4 pairs of long, strong dorsocentrals posteriorly, hairs between rows of dorsocentrals sparse and whitish; 3rd antennal segment length twice its width; genitalia as in Figs. 2–4, 5–6 (Lesser Antilles, Venezuela, British Guyana, Brazil, Paraguay, Panama) ..... *O. infractus* n. sp.
3. Third antennal segment as long as wide; male with hindfemur slightly enlarged, apical ⅓ or more of posteroventral row of bristles curved dorsad (Fig. 13) 4
– Third antennal segment length longer than wide; male with hindfemur not enlarged, apical ⅓ of posteroventral row of bristles wholly ventral, not curved dorsad (Fig. 10b) 5

4. Style about 2× length of 3 basal antennal segments combined; hindfemur with 3 bristles anteriorly; narrow apical margin of hypandrium with short pale pile (Puerto Rico and Virgin Is.) ..... *O. marginellus* (Fabricius)
– Style about same length as 3 basal antennal segments combined; hindfemur with 4 bristles anteriorly (Fig. 13a); apical ½ or more of hypandrium with abundant long, thin, pile (Dominica) ..... *O. villosus*, n. sp.
5. Basal ⅓ of hindfemur with at least 3–4 yellowish bristles in both ventral rows; 3rd antennal segment long, at least twice its width; male with abdomen slightly constricted, epandrium apically truncate (Fig. 11) and costal margin strongly dilated (Dominica, St. Lucia, Martinique) ..... *O. dimidiatus* n. sp.
– Hindfemur with all or most bristles in both ventral rows dark brown or black; 3rd antennal segment short, length about 1¼ times its width; male without an abdominal constriction, epandrium broadly emarginated apically (Fig. 7) costal margin not strongly produced (St. Vincent) ..... *O. emarginatus* n. sp.

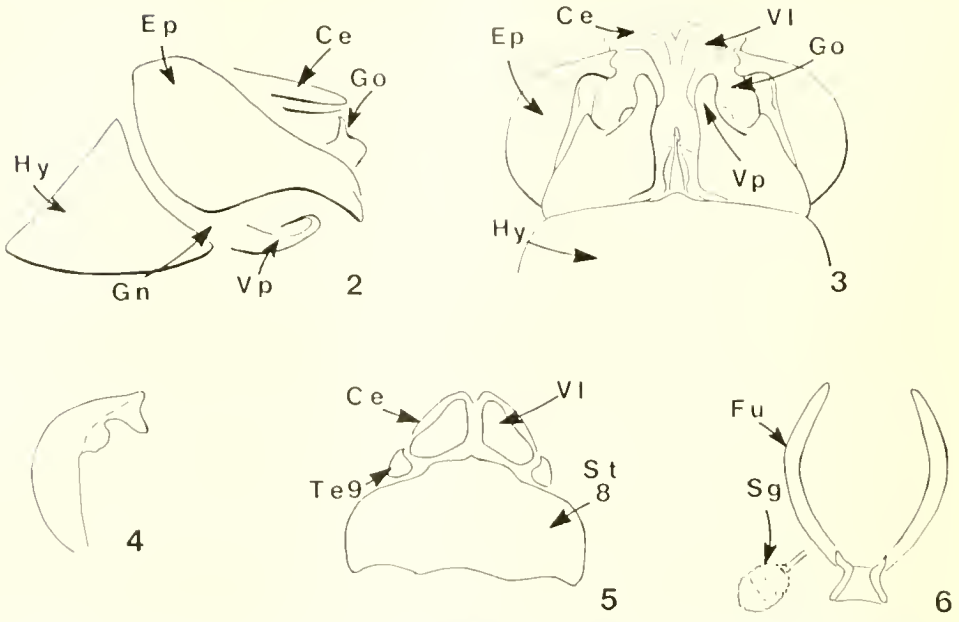
Ommatius infractus Scarbrough, New Species
Figs. 2–6

Diagnosis.—*Ommatius infractus* is easily recognized by a 3rd basal antennal segment twice as long as wide, strong scutellar and dorsocentral bristles, the ventral rows of bristles of the hindfemur wholly or almost wholly brown; sternite 8 of females with scattered, long, brownish hairs basally, none forming V-shaped pattern, the apical margin moderately produced and with a low, median point; males with slender femora, a slightly produced costal margin; the apical ⅓ of the epandrium moderately curved behind, the apex with a V-shaped notch; a flat, somewhat rectangular gonostylus and an elongated, pilose, gonocoxal process.

Ommatius infractus is similar to *O. barbiellinii* Curran (Curran, 1932) but males are easily distinguished by the external parts of the genitalia. The females of the two species are almost inseparable in external characters and usually require dissection of the genitalia for accurate identification. The female of *O. infractus* has a narrow furcal base, the spermathecal gland is oval with a wrinkled surface and tergite 9 extends slightly below the cercus.

Description.—*Male:* Length 13.0 mm. Head and palpus brown. Head mostly pale brassy yellow pollinose, front brownish in frontal view, dull brassy yellow from above. Face with yellowish hairs and 8 brown bristles, occipital pile white; 5–6 dorsal postocular, 2 ocellar, antennal and palpal bristles brown; palpal hairs mostly brown; inner 2–3 dorsal postocular bristles moderately proclinate. Antenna brown, 3rd segment twice as long as wide, style length 1½ that of 3 basal segments combined.

Scutum dark brown with mostly brown pollen, yellowish to pale brownish gray behind humeri, in grooves, above wings, and in prescutellar area. Pleuron mostly grayish pollinose, kat- and anepisternum brownish to yellowish. Scutal bristles dark brown, 2 notopleurals, 1 supraalar, 1 postalar, 3 prominant pairs of dorsocentrals, their lengths almost that of alar bristles. Scutellum brown pollinose basally, gray apically, scattered pale pile dorsally and 2 strong marginal bristles. Pleuron pile and bristles whitish.



Figs. 2–6. *Ommatius infractus* n. sp., genitalia. 2, Male, lateral view. 3, Same, ventral view. 4, Epandrium, dorsal view. 5, Female, ventral view. 6, Same, furca and spermathecal gland. Terms: Ce = cercus, Ep = epandrium, Fu = furca, Ho = hook of gonocoxite, Go = gonostylus, Gn = gonocoxite, Hy = hypandrium, Sg = spermathecal gland, St = sternite, Te = tergite, Vp = ventral process of gonocoxite, Vl = ventral lamella or plate.

Coxae brown with gray pollen and whitish pile and bristles. Legs mostly yellow to yellowish amber, fore- and midfemora with apical fourth or more brownish, hindfemur and hindtibia with apical third to half brown, fore- and midtibiae with brownish shadow apically. Tarsi mostly dark brown, the fore- and midtarsi with basal segments somewhat yellowish. Femora slender, midfemur below with row of 4–5 rather long, slender yellowish hairs posteriorly, 4 anteroventral brown bristly hairs or bristles on basal half, 3 brown bristles on anterior surface of which 2 are on apical half, usual posteroapical bristle absent. Hindfemur with 2 rows of rather short, brown, setigerous bristles, both rows extending full length of segment, 6 bristles anteroventrally, 5 posteroventrally; anterior surface with 1 amber (basally) and 2 brown bristles. Most bristles of foretibia, 2–3 on midtibia and 1 on foretarsus yellowish, the remaining tibial and tarsal bristles brown; fore- and midtibiae with a ventral row of thin amber hairs.

Wings hyaline, anterior cells slightly yellowish, ribs weak and yellowish; costal margin slightly produced. Veins brown, r-m crossvein before middle of discal cell, 1st medial cell slightly narrowed (by ⅓) beyond middle. Halter yellowish brown, knob brown.

Abdomen without a constriction, dark brown with brown pollen, the pollen light brown on sides and below, sides of tergite 1 and base of tergite 2 brownish to yellowish gray. Pile and hairs yellowish, tergites with brown setae medially, a few brown bristly hairs on apical 2–3 segments.

Genitalia (Figs. 2–4) dark brown with mostly yellowish or amber hairs apically, stronger and brown basally; cercal pile whitish. Epandrium with apical ⅓ tapered abruptly below, curved behind moderately and flattened dorsoventrally, inner margin incised mesally with a prominant lobe; apex of epandrium flared with a slight notch. Hypandrium with a thick patch of fine, yellowish, pile apically, and scattered hairs basally. Gonocoxal process elongate and flattened, the apex rounded, the inner margin with abundant hairs; the base with a short, acute, process medially. Gonostylus flat, somewhat rectangular, with a short apical point.

Female: Similar to male but with the following differences: length 12.4 mm, halter reddish brown. Wing without costal dilation, yellow in anterior cells or ribs; r-m crossvein beyond middle of discal cell, constriction of 1st medial cell less prominant than in male; midtarsus slightly brownish basally. Tibial and tarsal bristles brown except 2 yellowish ones on foretarsus. Midfemur with postapical bristle brown. Hindfemur with 2 long yellowish bristles in posteroventral row basally, each about 1½ times or more the length of brown bristles. Eighth and ninth abdominal segments dark brown to black, the tergites with mostly dark hairs, apical corners of tergite 9 curved slightly below cercus. Sternite 8 (Fig. 5) with short yellowish pile apically, scattered brown hair basally, none forming a discrete V-shaped row; apical margin noticeably produced, the middle only slightly swollen and with a low point or ridge. Genitalia as in Fig. 6.

Holotype ♂. St. Vincent, W.I. 1906, H. H. Smith. Allotype with name data. The holotype is in the NMNH and the allotype in the BM(NH).

Paratypes. 54 ♂♂ and 60 ♀♀ from the following countries and cities; *St. Vincent Island*; *Canal Zone* (Barro Colo. Island, Tobago Island, Corozal, Punta Patilla); *British Guyana* (Georgetown, Kartabo, Bartica District); *Venezuela* (San Esteban, Apupau Villa, Barinas, Akuriman Gran. Sabana); *Brazil* (Cavinna, Parana, Santa Caterina, Piedras, Chapadas, San Sabastiao, Sao Paulo, Maracaju, Piraja, Bahia); *Trinidad* (Port-of-Spain, Maquiripe Bay, Arima Valley, Maraval, Northern Mt. Range); *Tobago* (Mt. Irvine); *Little Tobago Island*; *Paraguay* (Bella Vista, Belem, Villarica, Alto Parana, Molinescue). Paratypes are in the following museums and private collections: CMZ, AMNH, CAS, USNM, MI, OSU, EF, BM(NH) and IZA.

Variation.—Major differences include: ♂ 10.6–16.5 mm, ♀ 8.5–15.0 mm. Face usually pale brassy yellow pollinose with pale yellowish hairs and 5 to 7 brown bristles, rarely 4 or 8. The front is typically brassy yellow pollinose from above. The postocular bristles range from 4–8 and the palpal bristles may be either wholly yellow or brown, sometimes combined. The palpal hairs are usually yellowish although brown hairs are not uncommon, especially dorsally, the knob of the halter ranges from yellow to reddish. Most specimens usually have the apical third to half of the fore- and midfemora and hindtibia and the apical two-thirds to three-fourths of the hindfemur dark brown to black. Some specimens in the southern most part of its range have reddish femora anteriorly and dorsally rather than yellow. The basal half or more of the foretarsomere is usually yellowish with 1–4 yellowish bristles, rarely brownish yellow with only dark bristles. The basal midtarsal segment is sometimes brownish.

Etymology.—The specific name, *infractus*, refers to the apical third of the epandrium being sharply bent or curved behind the male genitalia.

Ommatius emarginatus Scarbrough, New Species

Figs. 7–8

Diagnosis.—*Ommatius emarginatus* is readily recognized by an absence of scutellar bristles, the presence of a slightly produced costal margin, wholly pale yellow hindfemoral bristles, the 3rd basal antennal segment slightly longer than wide, a slender epandrium with the apex broadly notched, and a gonocoxite with a flat, elongated, somewhat apically flared process and 2 strong basal bristles.

Ommatius emarginatus is similar to *infractus* but can be identified easily by a lighter brown body, the absence of scutellar bristles, and the genital characters listed above.

Description. *Male:* Length 14.0 mm, brown. Head gray pollinose with a slight tint of yellow along the eye margin, most bristles and hairs whitish or white; 3–4 on upper face, antennal, 2 ocellar and 2–3 postocular bristles brown. Dorsal postocular bristles generally short with 3–4 curved forward for about half their lengths. Third antennal segment slightly darker than other segments and slightly longer than wide; style about 1½ times length of the 3 basal segments combined.

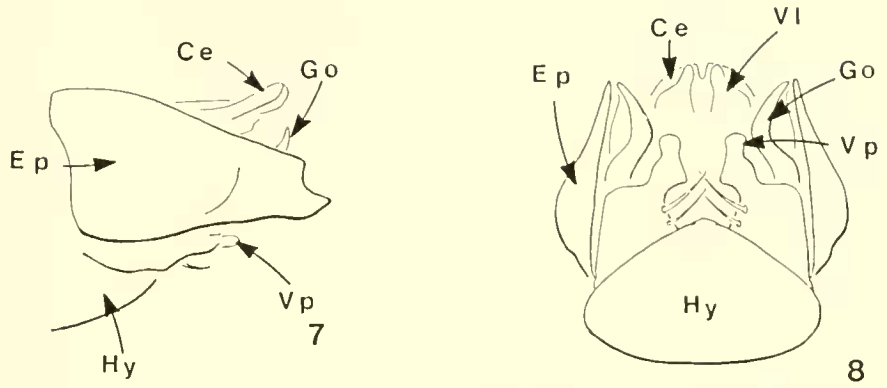
Scutum dark brown with mostly brown pollen, yellowish to brownish gray in grooves, on sides, behind humeral callus and posteriorly. Pleuron mostly gray with some pale yellow, anepisternum partly brown pollinose. Pleural pile sparse and pale, bristles yellowish. Scutal bristles black, 2 notopleural, 1 supra-alar, 1 postalar and 3 pairs of rather strong dorsocentrals posteriorly; several scattered, weak, brown hairs on sides above wings, pile or weak hairs absent between dorsocentrals. Scutellum brownish gray pollinose, marginal bristles absent.

Coxae brown with gray pollen, bristles and hairs white. Femora slender and mostly yellow; apical fourth of anterior 2 femora and extreme apices of midtibia light brown to brown; apical half of hindfemur and hindtibia dark brown, basal half of hindtibia dull yellowish brown; anterior surface of midtibia slightly darker brown than posteriorly. Basal segments of fore- and midtarsus mostly yellow with remaining segments of all tarsi dark brown. Femora with hairs and bristles mostly pale yellow; forefemur with 1–2 and midfemur with 2–3 rather strong ventral bristles basally, midfemur with 2 strong brown bristles in anteroventral row and 2 weaker pale hairs basally, 2 brown bristles on apical half anteriorly and 1 posteroapical. Hindfemur with bristles somewhat brownish yellow, 3 anteriorly, 2 extra setigerous bristles slightly posterior to anterior row (9), posterior row extending two-thirds length of segment with basal 2 1½ times longer than others. Fore- and midtibiae with a ventral row of weak yellow hairs and 3 bristles; foretarsus with 1 yellowish bristle, remaining bristles black.

Wing hyaline, somewhat yellowish or brownish with marginal and submarginal cells darkest. Veins dark brown anteriorly, slightly reddish brown basally, costal margin slightly dilated, r-m crossvein before the middle of discal cell. Halter knob reddish brown.

Abdomen brown with apical borders slightly lighter, pollen mostly brownish gray to yellowish on sides and below. Hairs mostly light yellow, tergite 1 with 4 pale brownish bristles, hairs of tergite 6–8 and those along apical margin of sternite 8 dark brown.

Genitalia (Figs. 7–8) dark brown basally with dark hairs, yellowish brown apically with yellowish ones. Epandrium elongate, length slightly more than twice width, basal two-thirds slightly swollen, apical third flat, slightly tapered ventrally,



Figs. 7–8. *Ommatius emarginatus* n. sp., genitalia. 7, Male, lateral view. 8, Same, ventral view.

dorsoapical margin slightly flattened on apical fifth or so, apex notched dorsally, anteroventral corner slightly projecting more than above. Hypandrium triangularly rounded apically with narrow patch of dense yellow pile and scattered brownish to yellowish hairs basally. Gonocoxite with a flat, elongated, somewhat wavy apical margin and flared, 2 strong bristles basally. Gonostylus slender, slightly triangular in cross section, almost straight on apical two-thirds, base narrowly joined to gonocoxite.

Female unknown.

Holotype ♂. St. Vincent, W.I. windward side, 1907, H. H. Smith. The holotype is in the BM(NH).

Etymology.—The specific name of the species refers to the notch in the apex of the epandrium.

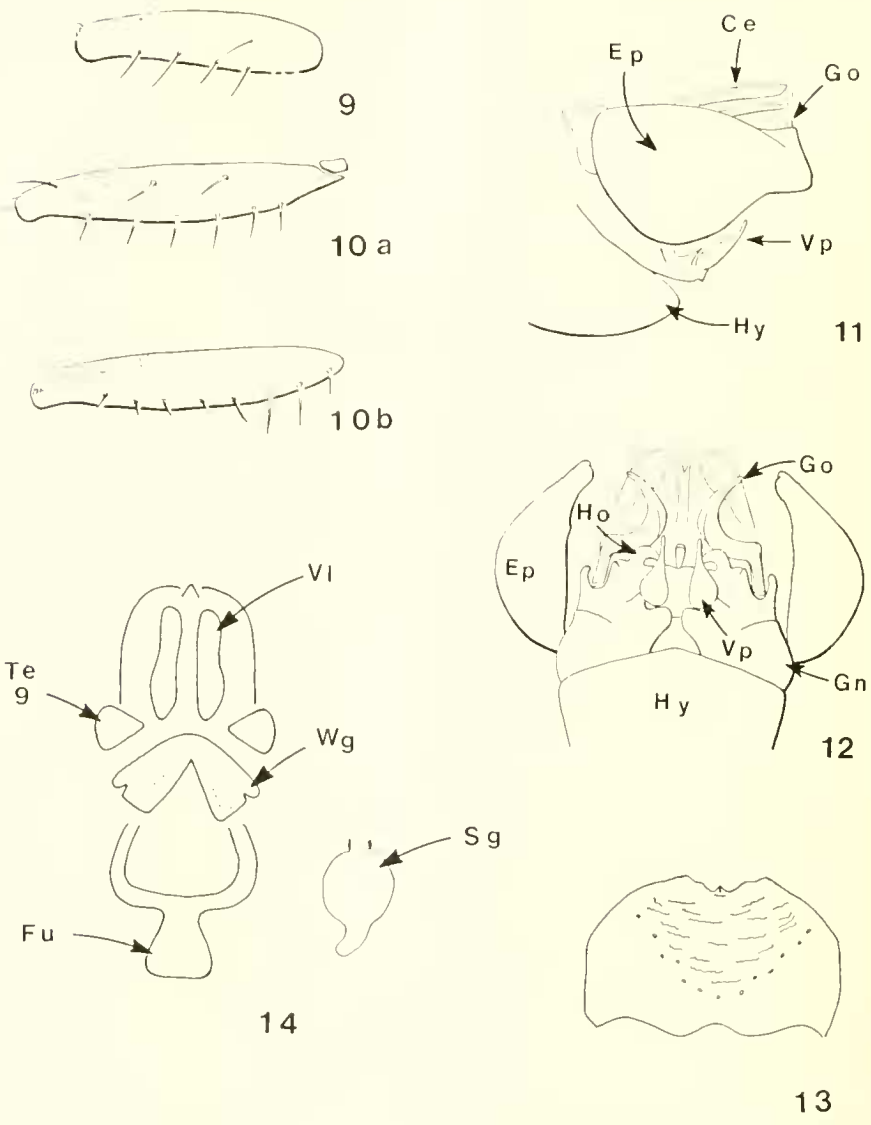
Ommatius dimidiatus Scarbrough, New Species

Figs. 9–14

Diagnosis.—*Ommatius dimidiatus* is recognized by the first antennal segment usually having only black hairs, palp brownish yellow basally, face with light yellowish gray pollen and several yellowish to brown bristles, an absence of scutellar bristles, femora and hindtibia with apical third brown, anteroventral row of hindfemur usually with 1–2 black apical bristles; male with costal margin produced strongly, abdomen constricted moderately, posteroventral row of hindfemur with apical 6–7 bristles black, the row extending almost entire length of segment with bristles in a straight line; apical margin of epandrium truncate with basal margin broadly rounded; gonostylus sickleshaped with base inserted in a U-shaped gonocoxal cavity; gonocoxite with a flat dorsal hook, an elongated urnshaped basal process with asymmetrical margins, and a transverse groove basally.

Ommatius dimidiatus is most closely related to *villosus* but the male may be easily identified by the genital characters, a long 3rd antennal segment, the posteroventral row of bristles on the hindfemur do not curve dorsad apically, the anteroventral row of bristles are usually all or almost all yellowish.

Description.—*Male:* Length 18.5 mm. Head dark brown, palp brownish yellow basally, dark brown apically, basal 2 antennal segments light brown. Face light pollinose, front brownish yellow in frontal view; occiput gray, somewhat yellowish



Figs. 9–14. *Ommatius dimidiatus* n. sp. 9, Male midfemur, anterior view. 10a, Male hindfemur, anterior view. 10b, Male hindfemur, posterior view. 11, Male genitalia, lateral view. 12, Same, ventral view. 13, Female, sternite 8. 14, Same, ventral view of genitalia with sternite 8 removed.

along eye margin. Ocellar, 6 pairs of postoculars and all antennal bristles dark brown, several remaining postoculars and palpal hairs yellowish; most occipital pile white. Face with 4 strong bristles and hairs creamy white, 6 long bristles yellowish to light brown. Antennal segments of equal lengths, 3rd basal segment length about twice its width, style length slightly more than 1½ times the 3 segments combined.

Scutum dark brown to black with mostly brown pollen dorsally, bright brownish golden to brownish yellow behind humeral callus, light brownish white in grooves,

on sides and posteriorly. Scutal bristles black, 2 notopleurals, 1 supra-alar, 1 postalar and 2 pairs of moderately strong dorsocentrals; scattered pile on sides and along rows of dorsocentrals. Scutellum brown pollinose with grayish borders and scattered long pale pile; bristles absent. Pleuron gray pollinose with some yellow or brown, anepisternum brown to brownish gray, pleural bristles slightly yellowish. Halter dull brownish yellow.

Wings hyaline, costal and basal cells yellowish, R_1 and $R_2 + R_3$ broadly bordered with brown and ribbed; costal margin strongly produced, r-m crossvein before middle of discal cell, 1st medial cell slightly constricted.

Legs. Coxae grayish pollinose with a trace of yellow, forecoxal bristles slightly yellowish. Femora slightly swollen, primarily honeycomb yellow with apical third brown; fore- and midtibiae with slight shadow of brown apically, hindtibiae with apical third brown. Tarsi with apical 4 segments brown, basal segments of fore- and midtarsi mostly yellowish to light brownish yellow. Legs with mostly short, yellowish, hairs; some setaceous, the latter usually black in dark areas of femora, scattered on tibiae and tarsi. Forefemur with 2 short, anterior black bristles, 1 anteroventral, ventral bristles yellowish; midfemur (Fig. 9) with 5 anterior black bristles, 1 postapical and 2 anteroventral yellowish bristly hairs basally. Hindfemur (Fig. 10) with 2–3 yellowish bristles anteriorly, 1 black apically; ventral 2 rows with bristles more or less evenly spaced, forming a straight line, anterior row with 5–6 light yellowish bristles plus an apical 1 black, posterior row with 3–4 yellow bristles basally, 6–7 black apically. Fore- and midtibiae with 3 yellowish bristles, the remaining bristles black, both tibiae with a ventral row of long, slender, black hairs. Foretarsus with 4 yellowish bristles.

Abdomen moderately constricted, narrowest at segment 3, segments brown with margins of several segments lighter, light yellow pollen on sides and ventrally, light brown dorsally. Dorsal setae mostly yellow, a few black medially on basal tergites, longer setae in apical corners, brown to black on last 3–4 segments, 2–3 pale brownish bristles on tergite 1; pile yellowish and abundant on basal segments.

Genitalia (Figs. 11–12) brown, somewhat lighter apically, with strong black hairs basally, weaker and yellowish apically. Cercus somewhat truncate apically, ventral plates elongated triangularly, separated along inner margins. Epandrium swollen most of its length, apical fourth to fifth strongly tapered ventrally and thin, margin truncate, ventroapical corner broadly rounded. Gonostylus sickle-shaped with a narrow basal arm inserted into a U-shaped gonocoxal cavity laterally, the apical half somewhat flat in cross section, rotated about 90° and directed forward. Gonocoxite with a flat, hooked, process dorsally, an elongated U-shaped process of which the outer margin protrudes somewhat laterally, a pronounced asymmetrical urn-like process, and a transverse groove basally. Hypandrium with apical margin almost straight and scattered dark pile basally.

Female: The allotype differs only slightly from the holotype male: size 14.5 mm; 7 facial, 2 foretibial, all midtibial bristles dark brown; 2 foretarsal bristles yellowish. All bristles in posteroventral row of hindfemur yellowish, 2 bristles on basal half of latter row stronger and longer than remaining. Venation typical of females, wing surface slightly yellowish, subcostal cell brownish. Costal bulge and constriction of 1st medial cell and abdomen absent. Tergites 8–9 shiny black, apical corners not noticeably projecting posteriorly. Cercus pale brownish yellow. Sternite 8 (Fig. 13) black basally, yellowish brown apically, cordate-shaped, the

latter surface shiny, with low transverse ripples and numerous reddish hairs posteriorly; anterior margin of sternite with a noticeable notch, the surface slightly thick with a low ridge. Genitalia as in Fig. 14.

Holotype ♂. *Dominica,* Clarke Hall, Cocoa Trail, 11.16.1965, W. W. Wirth. Allotype ♀ same location, III.21–31,1965,W. W. Wirth. Paratypes: 2 ♀, 2 ♂ nr. Clarke Hall, Mannett's Gutter, IV.28, V.1–3.1964, III.21–31.1965, O. S. Flint, Jr.; ♂, 3 ♀ Clarke Hall, II.16, III.21–31.1965, W. W. Wirth; ♀ Clarke Hall, Layon Vall. II.4.1965 H. E. Evans; ♀, 3 ♂ Clarke Hall Est., III.29, IV.20–21, V.23,1966, R. J. Gagné; ♀, South Chiltern, V. 25–27,1965, D. R. Davis. *Martinique,* ♂ Tivoll, 20.VII.1945, H. Stehle, ♀ St. Pierre, 23.VI.1965, D. R. Davis, 2 ♀ no data. *St. Lucia,* ♀ Soufriere, VII.1963, J. Maldonado. The holotype, allotype and 17 paratypes are in the USNM; 2 paratypes are in the MCZ.

Variation.—Lengths ♂ 18.5 mm. ♀ 14.5–16.5 mm. The brown coloration of the leg segments is sometimes dark brown apically and may extend as a yellowish brown slightly beyond the apical third on the hindfemur. The usual yellowish leg bristles may be reddish, rarely black, in dark specimens. The anterior surface of the hindfemur usually has 3 bristles, rarely 4, and 1 is noticeably shorter; the preapical bristle is always black. Two males have only yellowish bristles in the anterior row of the hindfemur. The bristles of the basal antennal segment, hindtibia, midfemur, face and postocular region are sometimes yellowish.

Etymology.—The specific epithet *dimidiatus* refers to the one-sided or asymmetrical base of the urn-shaped gonocoxal process.

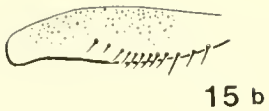
Ommatius villosus Scarbrough, New Species

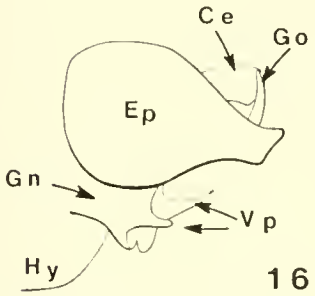
Figs. 15–17

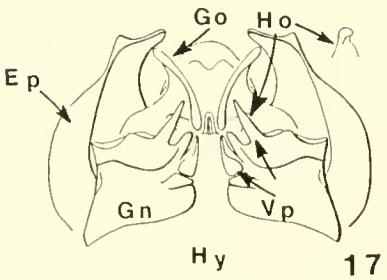
Diagnosis.—*Ommatius villosus* is easily recognized by its blackish body, the brassy yellow facial pollen, 3rd antennal segment only slightly longer than wide, scutellar and dark facial bristles absent, a moderately constricted abdomen, a strongly produced costal margin, a black palp; midtarsus with basal tarsomere reddish brown to brown, fore- and midfemora with long black streaks anteriorly, posterior row of bristles on the hindfemur extend about two-thirds length of segment, the apical 3–4 bristles curved in a line posteriorly, most bristles in posterior row black and spaced unusually close for most of its length; the apical margin of the epandrium oblique, the ventroapical corner with an acute angle; gonostylus triangular in cross section, lateral arm attached above base; and gonocoxal cup with an elongated bladelike process; and the presence of abundant long, weak, hairs on the hypandrium.

Ommatius villosus is somewhat similar to *dimidiatus* but is readily identified by the blackish body, brassy facial pollen, a short 3rd antennal segment, the black fore- and midfemoral dark streaks, the reddish brown to brown midtarsus, the closely spaced bristles in the posterior row on the hindfemur, and the abundant weak hairs on the hypandrium.

Description.—*Male:* Length 18.0 mm. Head and palp black, face and front brassy yellow pollinose in frontal view, occiput gray to pale yellow gray. Ocellar, 7 dorsal postocular and most antennal bristles black; 1st antennal segment with several pale yellow hairs. Face and palp with bristles or hairs pale yellow to yellow, occipital hairs white. Antennal segments of equal lengths, 3rd segment only slightly longer than wide; style about twice combined length of all segments.







Figs. 15–17. *Ommatius villosus* n. sp., hindfemur and genitalia of male. 15a, Anterior view. 15b, Posterior view. 16, Lateral view. 17, Ventral view.

Thorax black, scutum with mostly brown pollen, humeral callus and spot behind brassy yellow to brownish yellow; oblique grooves, side above wing, prescutellar region and scutellum pale yellowish gray to gray pollinose. Scutal bristles black, 2 notopleurals, 1 or 2 supra-alars, 1 postalar and 4–5 moderately long dorsocentrals; scattered short hairs on side and between dorsocentrals posteriorly. Scutellum with scattered weak, pale pile; bristles absent. Pleuron yellowish gray to gray pollinose, anepisternum brown to yellowish gray, bristles and pile pale yellow. Halter knob reddish brown, stalk pale.

Wings hyaline, somewhat yellowish, veins reddish basally, dark brown anteriorly, R_1 and R_{2+3} broadly margined with a brown, costal cell yellow. Costal margin strongly produced anteriorly, r-m crossvein before middle of discal cell, 1st medial cell slightly constricted before middle.

Legs with coxae yellowish to gray pollinose, yellowish bristles and white hairs. Fore- and midfemora with black streaks extending almost entire lengths anteriorly and dorsally, forefemoral streak wide, covering almost entire anterior surface, about twice width of that on midfemur; hindfemur black except for basal fifth. Femoral bases reddish, forefemur somewhat lighter and more brownish. Hindtibia black on apical fourth, midtibial apex and all tarsi brown to dark brown, basal tarsomeres of fore- and midtarsi slightly contrasting in color but clearly not yellowish basally; fore- and midtibiae with anterior surfaces slightly brownish, tibiae otherwise yellowish. Femora and tibiae with mostly short, fine, yellowish hairs, some setaceous antero- or posteroventrally, often black; bristles mostly black, forefemur with 1 short, anteroventral, black bristle and 2–3 slightly strong yellow ones ventrally. Midfemur with 5 black bristles anteriorly, 1 black posteroapically, anteroventral row with 2 weak, pale, hairs basally. Hindfemur with 4 yellowish or amber bristles anteriorly, anteroventral row with 4 yellowish bristles basally and 4 black apically, each more or less evenly spaced the entire length of the

segment; posteroventral row (Fig. 15) with 2 yellowish bristles basally and 10 black bristles apically, the latter somewhat closely spaced with the apical 3–4 curving in a line behind the segment, the entire row extending about two-thirds the length of the segment. Fore- and midtibiae and tarsi with 2 yellowish bristles, the remaining black. Fore- and midtibiae with a ventral row of weak, black, hairs.

Abdomen dark brown to black, moderately constricted with segment 3 being narrowest, brown pollen dorsally with yellowish gray on sides of tergites and on sternites, lateral margins of apical segments 3–5 with some bright yellow pollen. Tergites with mostly yellowish setae, brown dorsally on apical 2–3 tergites, the margins with 2–3 long bristles; 5 pale brownish bristles on tergite 1; pile long and whitish basally.

Genitalia (Figs. 16–17) mostly dark brown with yellowish or amberish hairs apically, scattered blackish hairs basally. Epandrium swollen on basal three-fourths or more, apical third somewhat reddish and abruptly narrowed ventrally, ventroapical corner angle acute, apical margin oblique. Gonostylus slender, slightly bent forward, triangular in cross section on apical 3rd, immediate base free from lateral arm. Gonocoxite with dorsal, apically projecting, hooked process; a wide cuplike process with a long bladelike tooth on the outer rim; and a long, canallike basal process with a flared base. Hypandrium simple, apical margin rounded, with abundant long, weak, yellowish hairs. Plates below cercus fused along inner margins.

Female unknown.

Holotype ♂. *Dominica,* W. I., Clarke Hall Est., VI.11.1966, G. Steyskal (Bredin-Archbold, Smithsonian Bio. Surv. of Dominica). Paratypes. *Dominica,* 2 ♂ Grande Savane, V.30.1965, D. R. Davis; ♂ same location, IX.15.1964, T. J. Spilman; 2 ♂ Clark Hall, VI.3.1964, O. S. Flint, Jr. All specimens are in the USNM collection.

Variation.—The males differ in length 16.5–17.5 mm; two males have mostly brownish gray pollen on the scutum and the anterior row of ventral bristles on the hindfemur are entirely yellowish. The basal 2–3 bristles in the posterior row are usually yellowish. The basal segments of the midtarsi are somewhat light brown on 3 paratypes. The face and front are usually pale brassy yellow.

Etymology.—The specific name of *villosus* refers to the abundant, long, weak, hairs on the hypandrium.

Ommatius marginellus (Fabricius)

Asilus marginellus Fabricius, Species Insectorum, II., p. 464, 1781; Mantisse Insectorum, II., p. 178, 1787; Type locality Virgin Islands, St. Croix. Type ♂, Kieler Collection, Copenhagen, Denmark.

Dasyopogon marginellus; Wiedemann, Diptera Exotica, I., p. 213, 1821.

Ommatius marginellus; Coquillett, 1910; 579. Designated type species; Wolcott, 1948, vol. 32, p. 435; Hull, 1962, Bull. 224, pt. 2, pp. 434–436; Farr, 1965: 19–25. Removed from list of asilids from Jamaica; Martin and Papavero, 1970: 59.

Distribution.—Puerto Rico and the Virgin Islands.

Although *O. marginellus* was not found in this region of the Caribbean, its range probably extends into the northern islands of the Lesser Antilles.

Diagnosis.—*Ommatius marginellus* is recognized by the absence of marginal

scutellar hairs or bristles, the presence of yellowish to orangish facial bristles, face and abdomen yellow pollinose, 1st antennal segment with pale yellow hairs below, 3rd segment as long as wide, hindfemoral bristles mostly yellowish to orangish; male with costal margin produced moderately, posteroventral row of hindfemur with 4–8 black bristles apically, apical ⅓ or more of row slightly curved dorsad, epandrium subtruncate apically, gonostylus base narrowly joined to lateral arm; female with apical corners of tergite 9 slightly produced, and sternite 8 with mostly brown bristles and a prominent median notch and 2 mediolateral protuberances apically.

Ommatius marginellus is somewhat similar to the female of *O. prolongatus* n. sp. in the short 3rd antennal segment, the pale facial hairs and bristles, and pale yellowish bristles on the hindfemur, but differs by the absence of weak scutellar hairs, abundant posterior dorsocentrals and the slightly brownish facial bristles.

Ommatius prolongatus Scarbrough New Species
Figs. 18–19

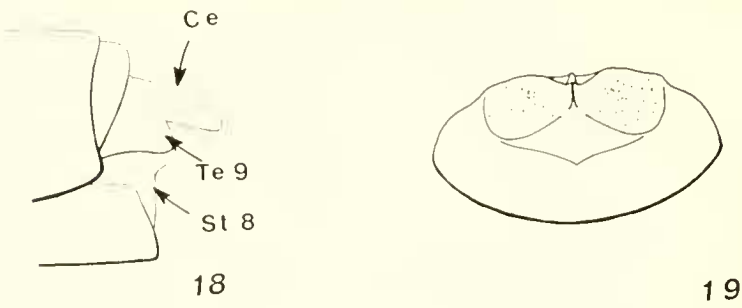
Diagnosis.—*Ommatius prolongatus* is recognized by the presence of a few pale brownish bristles on the upper face, a 3rd antennal segment about as long as wide; numerous weak brown hairs between the dorsocentrals posteriorly, 2–3 weak brown scutellar hairs on margin of about same length as dorsal pile; 8–10 pairs of weak dorsocentrals posteriorly; hindfemur and sternite 8 with only pale yellowish hairs and bristles; apical corners of tergite 9 greatly produced; apical margin of sternite 8 slightly produced medially, moderately thickened with a protruding rounded point; and the apical surface of sternite 8 smooth with 2 deep depressions laterally.

The female of *O. prolongatus* is similar to *O. marginellus* (Fabricius) (Scarbrough, 1984b). *Ommatius prolongatus* differs in the presence of pale brownish facial bristles, the weak scutellar and dorsocentral hairs, the abundant weak brown hairs between the dorsocentrals posteriorly and a protruding rounded point on the apical margin of sternite 8.

Description.—*Female:* Length 13.2 mm, head brown. Face, front and occiput gray pollinose, front with a trace of yellow. Most bristles and hairs whitish, a few on upper face with some brown; antennal, 2 ocellar and 7 postocular bristles dark brown. Occipital pile white. Antennal style twice length of 3 basal segments combined, 3rd segment, short, about as long as wide.

Thorax black, scutum brown pollinose, brownish gray to gray in grooves, on sides and in prescutellar region, area behind humeral callus dull yellow; pleuron and scutellum gray pollinose. Scutal bristles black, 2 notopleurals, 1 supra-alar, 1 postalar and a row of abundant, dorsocentrals extending most or entire length of scutum, 8–10 pairs of unusually short, weak, brown hairs posteriorly; side above wing and between rows of posterior dorsocentrals with numerous weak, brown hairs. Scutellum with long white pile and 2 thin, brown, marginal hairs. Pleuron pile sparse, short and whitish; bristles yellowish. Halter yellow.

Coxae dark brown with grayish pollen and whitish bristles. Femora and tibiae primarily yellowish; apical half of anterior surfaces of fore- and midfemora and apical two-thirds of hindfemur brown. Fore- and midtibia with narrow apical bands, hindtibia brown on apical third. Tarsi brown, basal segments of fore- and midtarsi brownish yellow. Bristles and hairs of femora mostly yellow; forefemur



Figs. 18–19. *Ommatius prolongatus* n. sp., female genitalia. 18, Lateral view. 19, Sternite 8.

with 1–2 anteroventral, short, yellowish setae, ventral row and posteroventral row of midfemur with rather strong, long, bristly hairs; midfemur with 6 strong black bristles (1 postapical, 3 on anterior surface, 2 in anteroventral row). Hindfemur with 2 rows of yellowish setigerous bristles extending almost entire length of segment, apical 2–3 in both rows and basal 1 in anterior row short, basal 3 in posterior row long, 3 yellowish bristles anteriorly. Tibial and tarsal bristles mostly black, basal tarsomere of foretarsus and foretibia with 1–2 yellowish bristles. Foretibia with a ventral row of long, thin, yellowish hairs.

Wing hyaline, r-m crossvein beyond middle of discal cell, anterior cells without brownish tint. First medial cell without a noticeable constriction beyond middle.

Abdomen brownish with light borders, pollen light reddish brown dorsally, yellowish on sides and ventrally. Bristles and hairs mostly yellowish, brown on tergites 5–8, most abundant and longer posteriorly. Tergite 9 (Fig. 18) with apical corners greatly produced. Sternite 8 (Fig. 19) with pale yellow bristles basally, apical margin slightly produced, the middle greatly thickened with a rounded point and ridge in lateral view, the apical surface of the sternite shiny and smooth with 2 depressions laterally. Genitalia not dissected.

Male unknown.

Holotype ♀. Plymouth, Montserrat, W.I., 11.17.1937, S. T. Danforth. The holotype is in the USNH.

Etymology.—The name *prolongatus* is in reference to the elongated apical corners of tergite 9 in the female.

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Literature Cited

Bullington, S. W. and R. J. Lavigne. 1984. Review of the genus *Ommatius* Wiedemann (Diptera: Asilidae) in Eastern United States with descriptions of five new species. Ann. Entomol. Soc. Am. 77: 372–392.

Coquillett, D. W. 1910. The type-species of the North American genera of Diptera. Proc. U.S. Natl. Mus. 37: 499–647.

Curran, C. H. 1928. New Species of *Ommatius* from America, with key (Diptera: Asilidae). Am. Mus. Novit. 327: 1–6.

———. 1953. The Asilidae and Mydaidae of the Bimini Islands, Bahamas, British West Indies (Diptera). Am. Mus. Novit. 1644: 5–6.

Fabricius, J. C. 1781. Species Insectorum exhibentes eorum differentias specificas symonyma, auctorum, locanatalia. II. Hamburgi et Kilonii. 2: 464.

———. 1787. Mantissa Insectorum sisten species nuper detectas. II. Hafniae. 2: 178.

Farr, T. H. 1965. The robber-flies of Jamaica (Diptera: Asilidae). Pt. 2. Bull. Inst. Jam. Sci. Ser. 13: 5–36.

Hull, F. H. 1962. Robber-flies of the world. The genera of the family Asilidae. U.S. Natl. Mus. Bull. Pt. 2. 224: 434–436.

Martin, C. H. and N. Papavero. 1970. Family Asilidae, pp. 58–60. *In* Catalogue of the Diptera of the Americas South of the United States. Mus. Zool. Univ. São Paulo. 35b: 1–139.

Scarbrough, A. G. 1984a. Synopsis of *Ommatius* Wiedemann from Hispaniola. J. N.Y. Entomol. Soc. 92: 131–149.

———. 1984b. Four species of *Ommatius* Wiedemann (Diptera: Asilidae) from Puerto Rico and the Virgin Islands. Proc. Entomol. Soc. Wash. 85: 610–629.

———. 1985. New species *Ommatius* Wiedemann (Diptera: Asilidae) from Cuba and the Bahamas. N.Y. Entomol. Soc. Submitted for publication.

Scarbrough, A. G. and R. Rutkauskas. 1983. A new species of *Ommatius* (Diptera: Asilidae) from San Salvador, the Bahamas. Proc. Entomol. Soc. Wash. 85: 144–151.

Wiedemann, C. R. W. 1821. Diptera exotica. Kiliae 1: 213.

Williston, S. W. and J. M. Aldrich. 1896. On the Diptera of St. Vincent (West Indies). Trans. Entomol. Soc. London 1896: 304.

Wolcott, G. N. 1948. The insects of Porto Rico. J. Agric. Univ. P.R. 32: 453.